



CONFORMANCE TEST REPORT FOR EN 301489-1/-6

Report No.: 60.860.7.156.02E

Client: SunCorp Communications Ltd.
Product: DECT Phone
Model: DECT20-B93 (FP)
Manufacturer/supplier: Shenzhen Guo Wei Electronics Co., Ltd.

Date test item received: 2007/09/21
Date test campaign completed: 2007/10/08
Date of issue: 2007/10/11

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Total number of pages of this test report: 40 pages

Approved by

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1 TEST REPORT CERTIFICATION

Client : SunCorp Communications Ltd.
 Address : Room 1907-08, 19/F, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong
 Manufacturer : Shenzhen Guo Wei Electronics Co., Ltd.
 EUT : DECT Phone
 Model No. : DECT20-B93 (FP)
 Test Specifications : Emissions
 EN 55022: 2006(Class B)
 EN 61000-3-2:2006
 EN 61000-3-3:2000/A2:2005
 Immunity
 EN 61000-4-2: 2001
 EN 61000-4-3: 2006
 EN 61000-4-4: 2004
 EN 61000-4-5: 2001
 EN 61000-4-6: 2005
 EN 61000-4-11:2004
 Regulations Applied : EN 301489-1:V1.6.1
 EN 301489-6:V1.2.1
 EN 61000-3-2:2006
 EN 61000-3-3: 2000/A2:2005

Test Location: T01

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

2 GENERAL INFORMATIONS

2.1 Description of EUT:

The Test Candidate is a fixed part with integrated antennas of a cordless telephone system for 3.1 kHz voice-communications on DECT -standard. For the integrated antennas a diversity-switch is included to the equipment. This fixed part (FP) is used in combination with a portable part (PP) for connections to the analogue public switched telephone network.

2.2 Related Informations of EUT:

Power Supply : 230Vac, 50Hz

Cables dedicated for EUT:

Power Line : ☒ Nonshielded ☐ Shielded ☐ None , length: 1.8 m
 Control Line : ☐ Nonshielded ☐ Shielded ☒ None , length: m
 LAN. Line : ☒ Nonshielded ☐ Shielded ☐ None , length: 1.5 m

* For more detailed features, please refer to User's Manual.

2.3 Modification Record:

No modifications were required. (That mean the EUT has complied with the requirement as tested.)

3 SUMMARY OF TEST RESULTS

3.1 Emissions:

3.1.1 Conducted Emissions

■-PASS

Peak EMI value to the limit: -17.6 dB at 22.559 MHz

3.1.2 Radiated Emissions

■-PASS

Peak EMI value to the limit: -6.5 dB at 59.100 MHz

3.1.3 Harmonics Current Emissions

■-PASS

The harmonics current values were under the limits of the class A equipment of the EN 61000-3-2.

3.1.4 Voltage Fluctuations and Flicker

■-PASS

The voltage fluctuations and flicker values were under the limits of the EN 61000-3-3 requirements.

3.2 Immunity:

3.2.1 Immunity Criteria:

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

Performance criterion for Continuous Phenomena applied to DECT Phone Transceivers (CT):

The BER of the signal as measured shall not exceed 1×10^{-3} during the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35dB less than the previously recorded reference level. At the conclusion of the test, the EUT shall operate as intended with no loss of user control functions or stored data and the communications link shall have been maintained during and after tests. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

Performance criterion for Transient phenomena applied to DECT Phone Transceivers (TT):

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EU shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. Where the EUT is capable of transmission, tests shall be performed to ensure that unintentional transmission does not occur.

Performance criterion for Continuous phenomena applied to DECT Phone Receive-only equipment (CR):

The primary functions shall be verified during each individual exposure in the test sequence. Additionally for equipment containing analogue speech circuits the speech output signal level shall be at least 35 dB less than the previously recorded reference level. At the conclusion of the test, the EU shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

Performance criterion for Transient phenomena applied to DECT Phone Receive-only equipment (TR):

At the conclusion of each exposure the EUT shall operate with no user noticeable loss of the communications link. At the conclusion of the total test comprising the series of individual exposures the EUT shall operate as intended with no loss of user control functions or stored data, as declared by the manufacturer, and the communications link shall have been maintained. This shall be verified by checking the primary functions.

3.2.2 Electrostatic Discharge:**■-PASS**

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.3 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz):**■-PASS**

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.4 Fast Transients Common Mode:**■-PASS**

For transceivers the general performance criteria TT shall apply. For stand alone receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.5 Surges, Common and Differential Mode:**■-PASS**

For transceivers the general performance criteria TT shall apply. For receivers the general performance criteria TR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.6 RF Common Mode, 0.15~80MHz:**■-PASS**

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

3.2.7 Voltage Dips and Interruptions:**■-PASS**

For transceivers the general performance criteria CT shall apply. For stand alone receivers the general performance criteria CR shall apply. For ancillary equipment the pass/fail criteria supplied by the manufacturer shall apply, unless the ancillary equipment is tested in connection with receivers or transceivers in which case the corresponding performance criteria above shall apply.

4 TEST DATA & RELATED INFORMATION

4.1 Emissions:

4.1.1 Conducted Emissions Test:

4.1.1.1 Conducted Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 01, 2007

Test Specification	EN 55022:2006 (Class B)		
Test Equipment	Calibration Date		Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30	Jul. 17, 2007		Jul. 16, 2008
LISN\Telemeter\NNB-2/16Z	Mar. 31, 2007		Mar. 30, 2008
LISN\EMCO\37100/2M	Feb. 13, 2007		Feb. 12, 2008
Climatic Condition	Ambient Temperature: <u>26°</u> C Relative Humidity: <u>68%</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Freq. (MHz)	Meter Reading (dBuV)				Factor (dB)	Result (dBuV)				Limit (dBuV)		Margins (dB)
	Q.P. Value		AVG. Value			Q.P. Value		AVG. Value		Q.P. Value	AVG. Value	Q.P. or AVG
	L1	L2	L1	L2		L1	L2	L1	L2			
0.166	40.9	39.3	----	----	0.3	41.2	39.6	----	----	65.2	55.2	-24.0
0.181	36.2	***	----	----	0.3	36.5	***	----	----	64.4	54.4	-27.9
0.255	37.4	39.0	----	----	0.2	37.6	39.2	----	----	61.6	51.6	-22.4
0.283	37.6	39.5	----	----	0.2	37.8	39.7	----	----	60.7	50.7	-21.0
0.623	***	29.9	----	----	0.2	***	30.1	----	----	56.0	46.0	-25.9
1.152	***	30.0	----	----	0.2	***	30.2	----	----	56.0	46.0	-25.8
1.160	30.3	***	----	----	0.2	30.5	***	----	----	56.0	46.0	-25.5
28.555	34.5	***	----	----	0.5	35.0	***	----	----	60.0	50.0	-25.0
28.562	***	35.2	----	----	0.5	***	35.7	----	----	60.0	50.0	-24.3

Notes: 1) Place of measurement: EMC LAB. of the ETC (1F)

2) The EUT was placed 0.8m above reference ground plane.

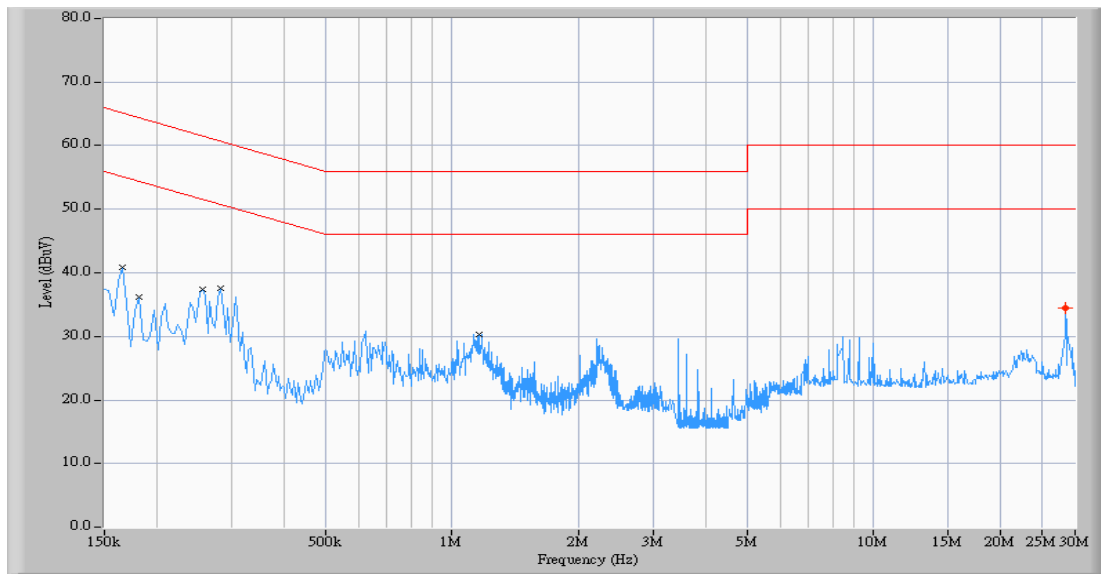
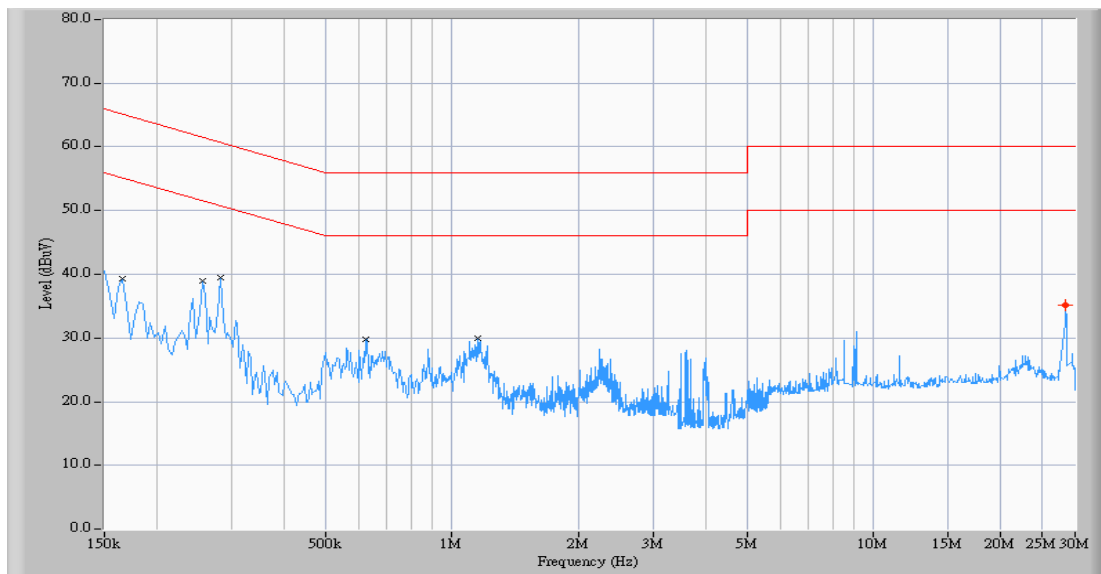
3) Example calculation: result for 0.166 MHz: $40.9 + 0.3 = 41.2 \text{ dB } \mu\text{V}$

4) ① If the data table appeared symbol of "***" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

③ If the data table appeared symbol of “#” means the noise was low, so record the peak value.

5) The estimated measurement uncertainty of the result measurement is $\pm 2.5\text{dB}$.

L1**L2**

B. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 01, 2007

Test Specification	EN 55022: 2006 (Class B)		
Test Equipment	Calibration Date		Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30	Jul. 17, 2007		Jul. 16, 2008
LISN\Telemeter\NNB-2/16Z	Mar. 31, 2007		Mar. 30, 2008
LISN\EMCO\37100/2M	Feb. 13, 2007		Feb. 12, 2008
Current probe\Schaffner\SMZ11	Apr. 02, 2007		Apr. 01, 2008
Climatic Condition	Ambient Temperature: <u>26°</u> C Relative Humidity: <u>68%</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Freq. (MHz)	Meter Reading (dBuA)		Factor (dB)	Result (dBuA)		Limit (dBuA)		Margins (dB)
	Q.P. Value	AVG. Value		Q.P. Value	AVG. Value	Q.P. Value	AVG. Value	Q.P. or AVG.
	ISN	ISN		ISN	ISN			
0.166	11.3	----	0.5	11.8	----	39.2	29.2	-27.4
0.255	10.1	----	0.2	10.3	----	35.6	25.6	-25.3
0.388	8.5	----	0.0	8.5	----	32.1	22.1	-23.6
0.914	7.8	----	0.3	7.5	----	30.0	20.0	-22.5
3.105	8.5	----	0.4	8.1	----	30.0	20.0	-21.9
22.559	11.9	----	0.5	12.4	----	30.0	20.0	-17.6

Notes: 1) Place of measurement: EMC LAB. of the ETC (1F)

2) The EUT was placed 0.8m above reference ground plane.

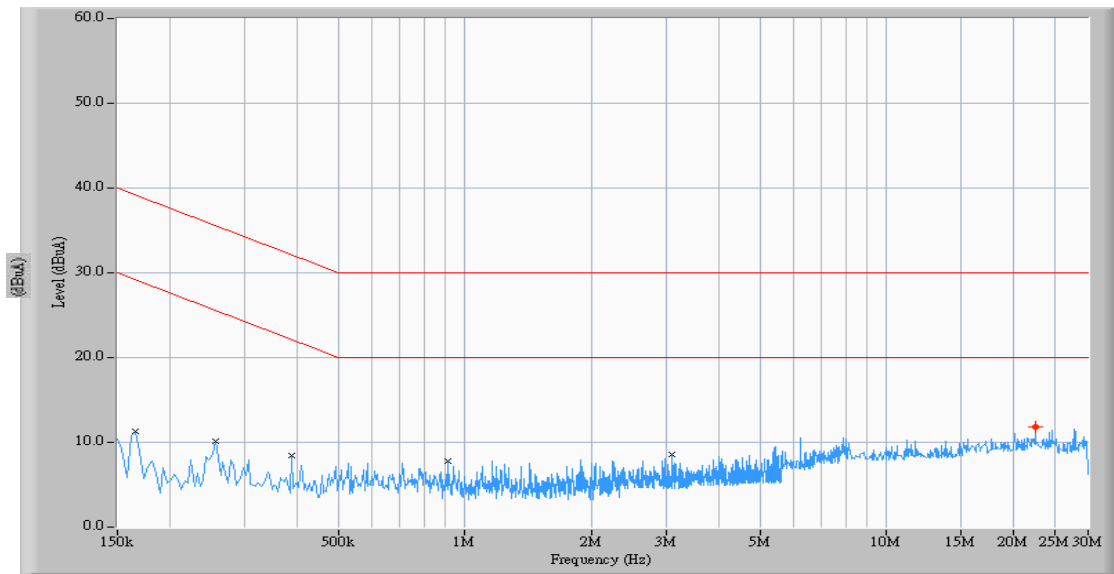
3) Example calculation: result for 0.166 MHz: $11.3 + (0.5) = 11.8 \text{ dB } \mu\text{A}$

4) ① If the data table appeared symbol of "****" means the value was too low to be measured.

② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

③ If the data table appeared symbol of “#” means the noise was low, so record the peak value.

5) The estimated measurement uncertainty of the result measurement is $\pm 2.5\text{dB}$.



4.1.1.2 Conducted Emissions Test Setup Photos:



4.1.2 Radiated Emissions Test:

4.1.2.1 Radiated Emissions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 01, 2007

Test Specification	EN 55022: 2006 (Class B)		
Test Equipment	Calibration Date		Recommended Recal. Date
EMI Test Receiver\R&S\ESCS30 Ant.- LogBiconi\EMCO\3142	Oct. 23, 2006 Mar. 30, 2007		Oct. 22, 2007 Mar. 29, 2008
Climatic Condition	Ambient Temperature: <u>23°</u> C Relative Humidity: <u>63%</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Emission Frequency (MHz)	Meter Reading (dBuV)		CORR'd Factor (dB/m)	Results (dBuV/m)		Limit (dBuV/m)	Margins (dB)
	HOR.	VERT.		HOR.	VERT.		
32.425	1.2	0.8	18.6	19.8	19.4	30	-10.2
56.675	6.4	***	9.4	15.8	***	30	-14.2
59.100	***	14.4	9.1	***	23.5	30	-6.5
122.150	4.2	***	9.4	13.6	***	30	-16.4
168.225	***	2.1	11.6	***	13.7	30	-16.3
173.075	1.7	***	11.6	13.3	***	37	-23.7
291.900	0.4	3.8	17.7	18.1	21.5	37	-15.5
367.075	***	0.6	20.5	***	21.1	37	-15.9
393.750	1.9	***	20.8	22.7	***	37	-14.3
430.125	***	1.6	21.4	***	23.0	37	-14.0

Notes: 1) Place of Measurement: Measuring site of the ETC (3F)2) Measurement Distance: 10 m3) Height of table on which the EUT was placed: 0.8 m4) Height of Receiving Antenna: 1 - 4 m5) Example Calculation: result for 32.425 MHz: $1.2 + (18.6) = 19.8 \text{ dB } \mu\text{V/m}$

6) ① If the data table appeared symbol of "****" means the value was too low to be measured.

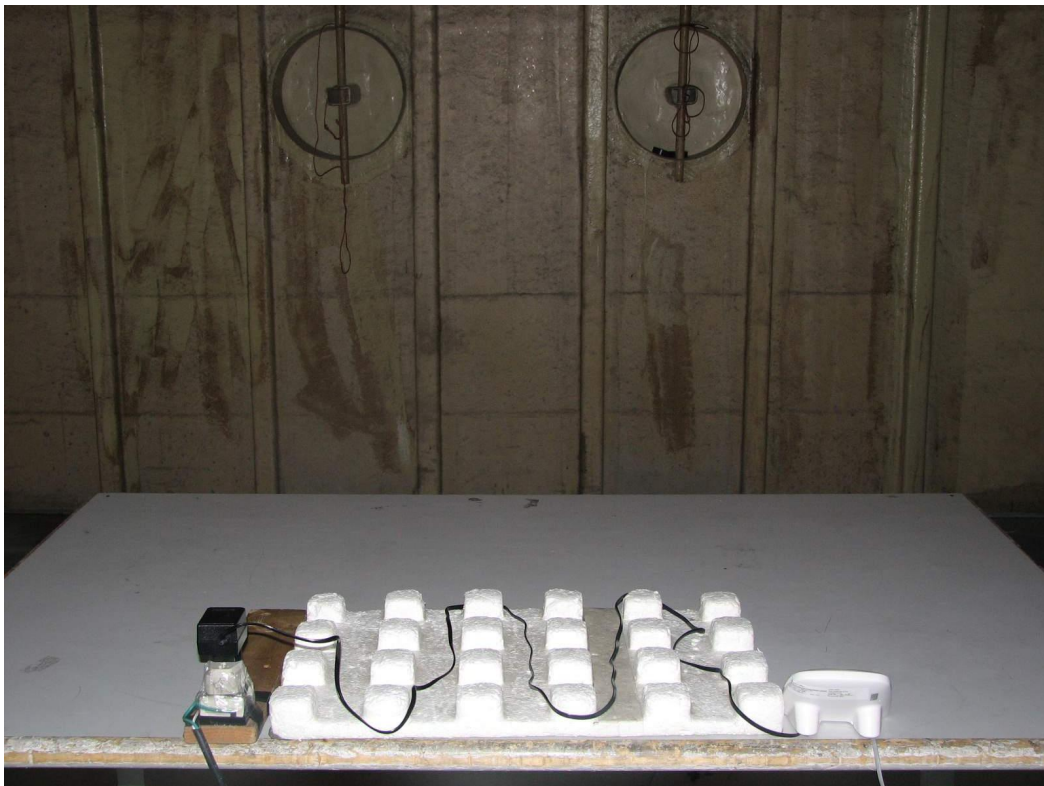
② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.

③ If the data table appeared symbol of “#” means the noise was low, so record the peak

7) The estimated measurement uncertainty of the result measurement is

+ 4.5dB / - 4.6dB ($30\text{MHz} \leq f \leq 300\text{MHz}$)+ 4.3dB / - 4.3dB ($300\text{MHz} \leq f \leq 1\text{GHz}$)

4.1.2.2 Radiated Emissions Test Setup Photos:



4.1.3 Harmonics Current Emissions Test:**4.1.3.1 Harmonics Current Emissions Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Oct. 01, 2007

Test Specification	EN 61000-3-2:2006		
Test Equipment		Calibration Date	Recommended Recal. Date
Power Analysis System\California Instruments\ MX45-3PI-413 (PACS-3)		Aug. 11, 2007	Aug. 10, 2008
Climatic Condition	Ambient Temperature: <u>23°</u> C Relative Humidity: <u>60%</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Test data see the next page.

Current Test Result Summary (Run time)

EUT: DECT20- B93(FP+PP) Tested by: TERRY
 Test category: Class-A per Ed. 3.0 (2005-11) (European limits) Test Margin: 100
 Test date: 10/1/2007 Start time: 4:07:21 PM End time: 4:10:31 PM
 Test duration (min): 3 Data file name: CTSMXL_H-000499.cts_data
 Comment: talk
 Customer:

Test Result: Pass Source qualification: Normal
 THCA(A): 0.009 I-THD(%): 48.473 POHC(A): 0.002 POHC Limit(A): 0.251
 Highest parameter values during test:

V_RMS (Volts): 229.75 Frequency(Hz): 50.00
 I_Peak (Amps): 0.070 I_RMS (Amps): 0.021
 I_Fund (Amps): 0.018 Crest Factor: 3.373
 Power (Watts): 2.0 Power Factor: 0.430

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	0.2	0.002	1.620	0.15	Pass
3	0.007	2.300	0.3	0.007	3.450	0.20	Pass
4	0.001	0.430	0.2	0.001	0.645	0.17	Pass
5	0.004	1.140	0.3	0.004	1.710	0.23	Pass
6	0.001	0.300	0.3	0.001	0.450	0.22	Pass
7	0.001	0.770	0.1	0.001	1.155	0.08	Pass
8	0.000	0.230	0.2	0.001	0.345	0.16	Pass
9	0.000	0.400	0.1	0.000	0.600	0.08	Pass
10	0.000	0.184	0.2	0.001	0.276	0.19	Pass
11	0.001	0.330	0.2	0.001	0.495	0.12	Pass
12	0.001	0.153	0.6	0.001	0.230	0.39	Pass
13	0.000	0.210	0.2	0.001	0.315	0.16	Pass
14	0.000	0.131	0.3	0.000	0.197	0.23	Pass
15	0.000	0.160	0.3	0.000	0.225	0.21	Pass
16	0.000	0.116	0.3	0.000	0.173	0.27	Pass
17	0.000	0.132	0.3	0.000	0.199	0.24	Pass
18	0.000	0.102	0.5	0.001	0.153	0.38	Pass
19	0.000	0.118	0.4	0.001	0.178	0.28	Pass
20	0.000	0.092	0.4	0.000	0.138	0.33	Pass
21	0.000	0.107	0.4	0.000	0.161	0.29	Pass
22	0.000	0.084	0.5	0.000	0.125	0.37	Pass
23	0.000	0.098	0.4	0.000	0.147	0.30	Pass
24	0.000	0.077	0.6	0.001	0.115	0.49	Pass
25	0.000	0.090	0.5	0.000	0.135	0.37	Pass
26	0.000	0.071	0.6	0.000	0.106	0.44	Pass
27	0.000	0.083	0.6	0.001	0.125	0.44	Pass
28	0.000	0.066	0.6	0.000	0.099	0.47	Pass
29	0.000	0.078	0.5	0.000	0.116	0.41	Pass
30	0.000	0.061	0.7	0.001	0.092	0.56	Pass
31	0.000	0.073	0.6	0.000	0.109	0.45	Pass
32	0.000	0.058	0.8	0.001	0.086	0.61	Pass
33	0.001	0.068	0.9	0.001	0.102	0.70	Pass
34	0.000	0.054	0.7	0.000	0.081	0.68	Pass
35	0.001	0.064	1.2	0.001	0.096	0.91	Pass
36	0.001	0.051	1.1	0.001	0.077	0.86	Pass
37	0.001	0.061	1.5	0.001	0.091	1.08	Pass
38	0.001	0.048	2.4	0.001	0.073	1.71	Pass
39	0.001	0.058	1.3	0.001	0.087	1.03	Pass
40	0.000	0.046	1.0	0.001	0.069	1.83	Pass

4.1.3.2 Harmonics Current Emissions Test Setup Photos:



4.1.4 Voltage Fluctuations and Flicker Test:**4.1.4.1 Voltage Fluctuations and Flicker Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Oct. 01, 2007

Test Specification	EN 61000-3-3: 2000/A2:2005		
Test Equipment		Calibration Date	Recommended Recal. Date
Power Analysis System\California Instruments\ MX45-3PI-413 (PACS-3)		Aug. 11, 2007	Aug. 10, 2008
Climatic Condition	Ambient Temperature: <u>23°</u> C Relative Humidity: <u>60%</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

	Test Data	Limit	Pass or Fail
Plt	0.070	0.65	Pass
Pst	0.160	1.00	Pass
dt	0.00 %	3.3 %	Pass
dmax	0.00 %	4.0 %	Pass
dc	0.00 %	3.3 %	Pass

4.1.4.2 Voltage Fluctuations and Flicker Test Setup Photos:



4.2 Immunity:

4.2.1 Electrostatic Discharge:

4.2.1.1 Electrostatic Discharge Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 08, 2007

Test Specification	EN 61000-4-2: 2001		
Test Equipment		Calibration Date	Recommended Recal. Date
ESD Simulator\Noiseken\ESS-2000-G365		Nov. 28, 2006	Nov. 27, 2007
Climatic Condition	Ambient Temperature: <u>25°</u> C		

Test Points	Contact Discharge (kV): Criterion					Air Discharge (kV): Criterion					Test times and voltage at each condition	
1.EUT-VCP	■ 2: _	■ 4: _	□ 6: _	□ 8: _	□ -: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
2.EUT-HCP	■ 2: _	■ 4: _	□ 6: _	□ 8: _	□ -: _	□ 2: _	□ 4: _	□ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
3.EUT-Top Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ -: _	■ 2: _	■ 4: _	■ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
4.EUT-Bottom Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ -: _	■ 2: _	■ 4: _	■ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
5.EUT-Front Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ -: _	■ 2: _	■ 4: _	■ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
6.EUT-Rear Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ -: _	■ 2: _	■ 4: _	■ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
7.EUT-Right Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ -: _	■ 2: _	■ 4: _	■ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos
8.EUT-Left Side	□ 2: _	□ 4: _	□ 6: _	□ 8: _	□ -: _	■ 2: _	■ 4: _	■ 8: _	□ 15: _	□ -: _	■ 10..neg	■ 10..pos

Result:	■ Complied □ Does not comply		
Criterion Required:	<u>B</u>	Criterion Met:	<u>A</u>

Note: “A” means the EUT operates with ■ no loss of functions.

■ no unintentional responses during and after test.

“--” means the test is not applicable.

4.2.1.2 Electrostatic Discharge Test Setup Photos:



4.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz):**4.2.2.1 Radio Frequency Electromagnetic Field Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Sep. 29, 2007

Test Specification	EN 61000-4-3:2006		
Test Equipment		Calibration Date	Recommended Recal. Date
Microphone\B&K\4134		Nov. 28, 2006	Nov. 27, 2007
Conditioning Amplifier\B&K\type 2690		Nov. 28, 2006	Nov. 27, 2007
Audio Analyzer\R&S\UPA		May 29, 2007	May 28, 2008
Signal Generator\Agilent\8648D		May 29, 2007	May 28, 2008
RF Power Amplifier\AR\50S1G4AM1		May 29, 2007	May 28, 2008
Wide Band RF Amplifier\KALMUS\7100LC		Nov. 28, 2006	Nov. 27, 2007
Climatic Condition	Ambient Temperature: <u>23°</u> C Relative Humidity: <u>62 %</u> RH		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

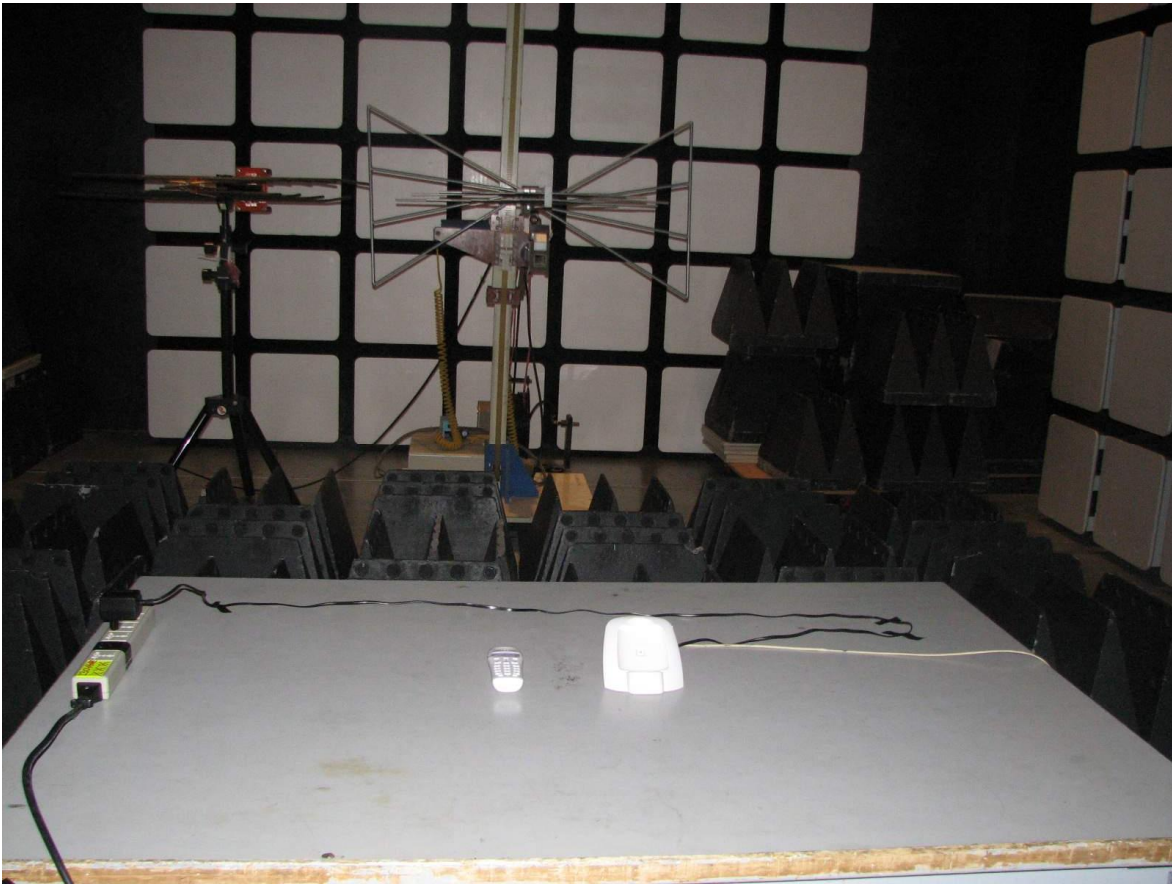
Frequency Range : <u>80</u> MHz ~ <u>1000</u> MHz <u>1400</u> MHz ~ <u>2000</u> MHz	Field Strength : <u>3</u> V/m	Modulation (AM 1kHz 80%)	
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : ≤ 1 % of preceding frequency value	Dwell Time : <u>2.9</u> s	
Frequency Range (MHz)	Polarization of Device	Test Result	
80~1000	Vertical	A	
80~1000	Horizontal	A	
1400~2000	Vertical	A	
1400~2000	Horizontal	A	

Note: “A” means the EUT operates with ■ BER less or equal than 1×10^{-3} during the test sequence.
 ■ the speech output signal level at least 35dB less than the previously recorded reference level.
 ■ no loss of user control functions or stored data and maintained communication link during and after the tests.
 ■ no unintentional transmission.

Remarks: Testing has been conducted at 3-meter anechoic chamber.

4.2.2.2 Radio Frequency Electromagnetic Field (80~1000MHz and 1400~2000MHz)

Test Setup Photos:



Radiated Immunity Test

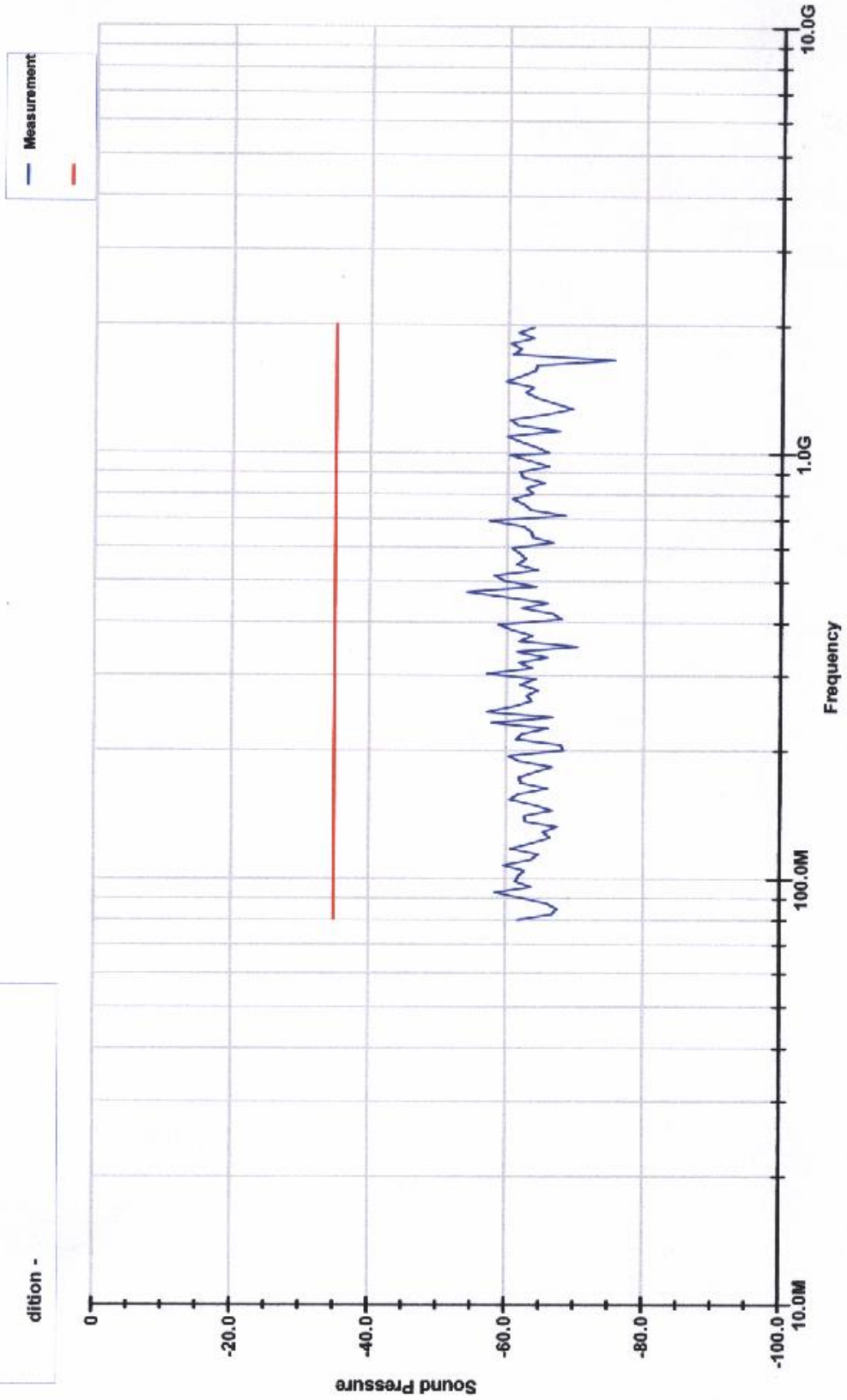
Sound Pressure

DECT ERP Hor

Manufacturer -

- DECT20-B93(FP+PP)

dition -



01:19:54 PM, Saturday, September 29, 2007



Radiated Immunity Test

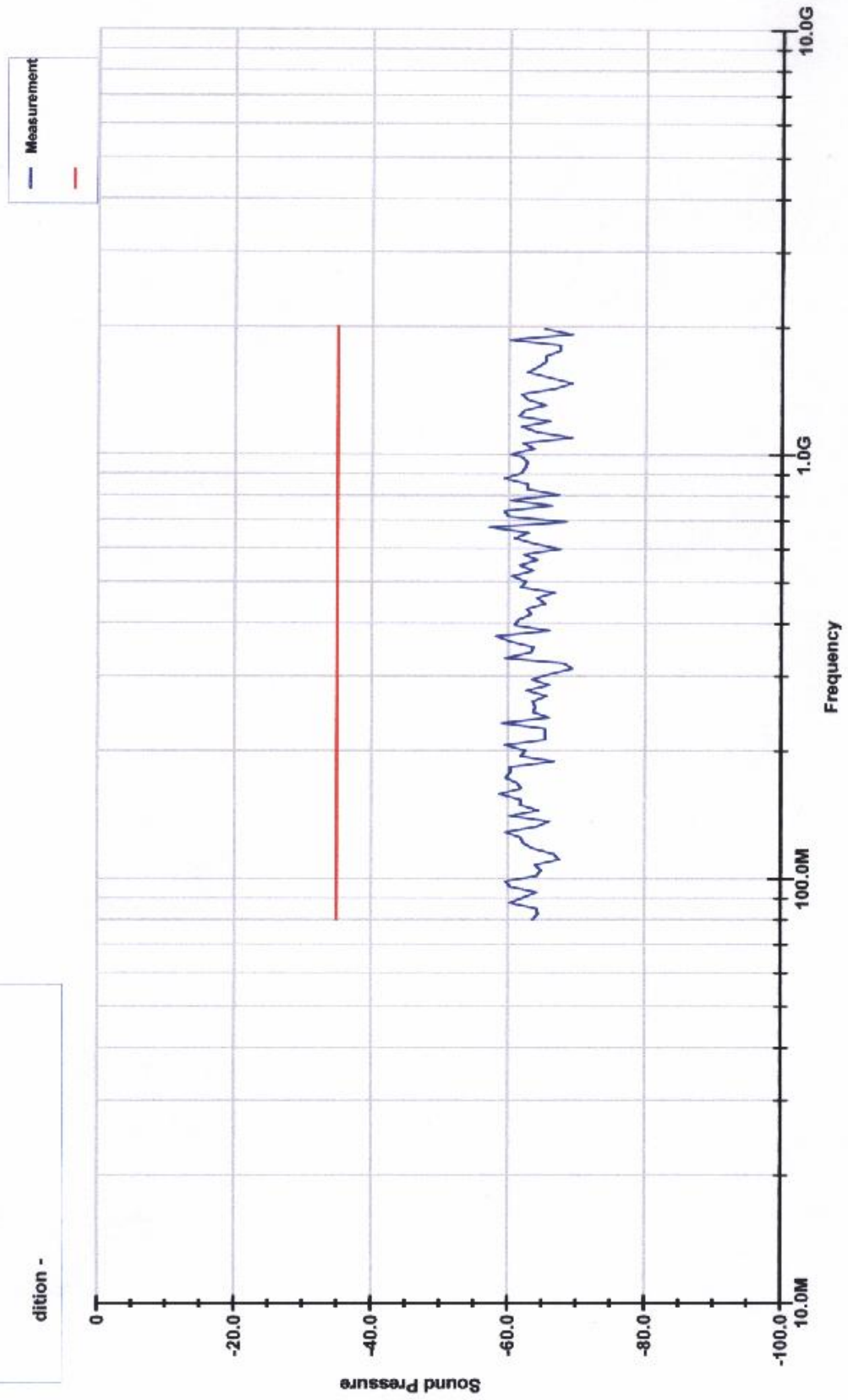
Sound Pressure

DECT ERP Vert

Manufacturer -

- DECT20-B93(FP+PP)

dition -



01:07:22 PM, Saturday, September 29, 2007

Radiated Immunity Test

Sound Pressure

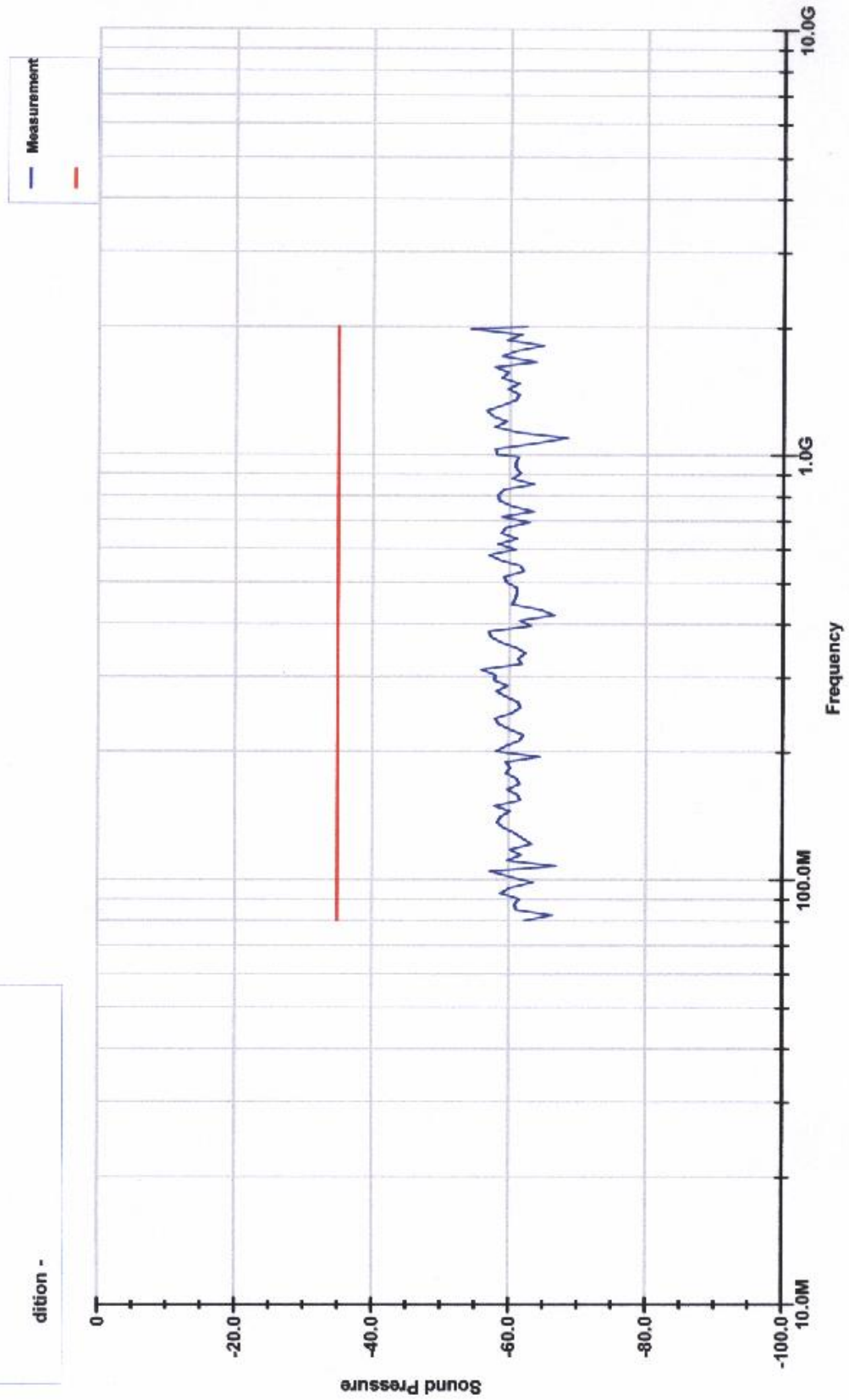
DECT MRP Hor



Manufacturer -

- DECT20-B93(FP+PP)

dition -



01:35:02 PM, Saturday, September 29, 2007

Radiated Immunity Test

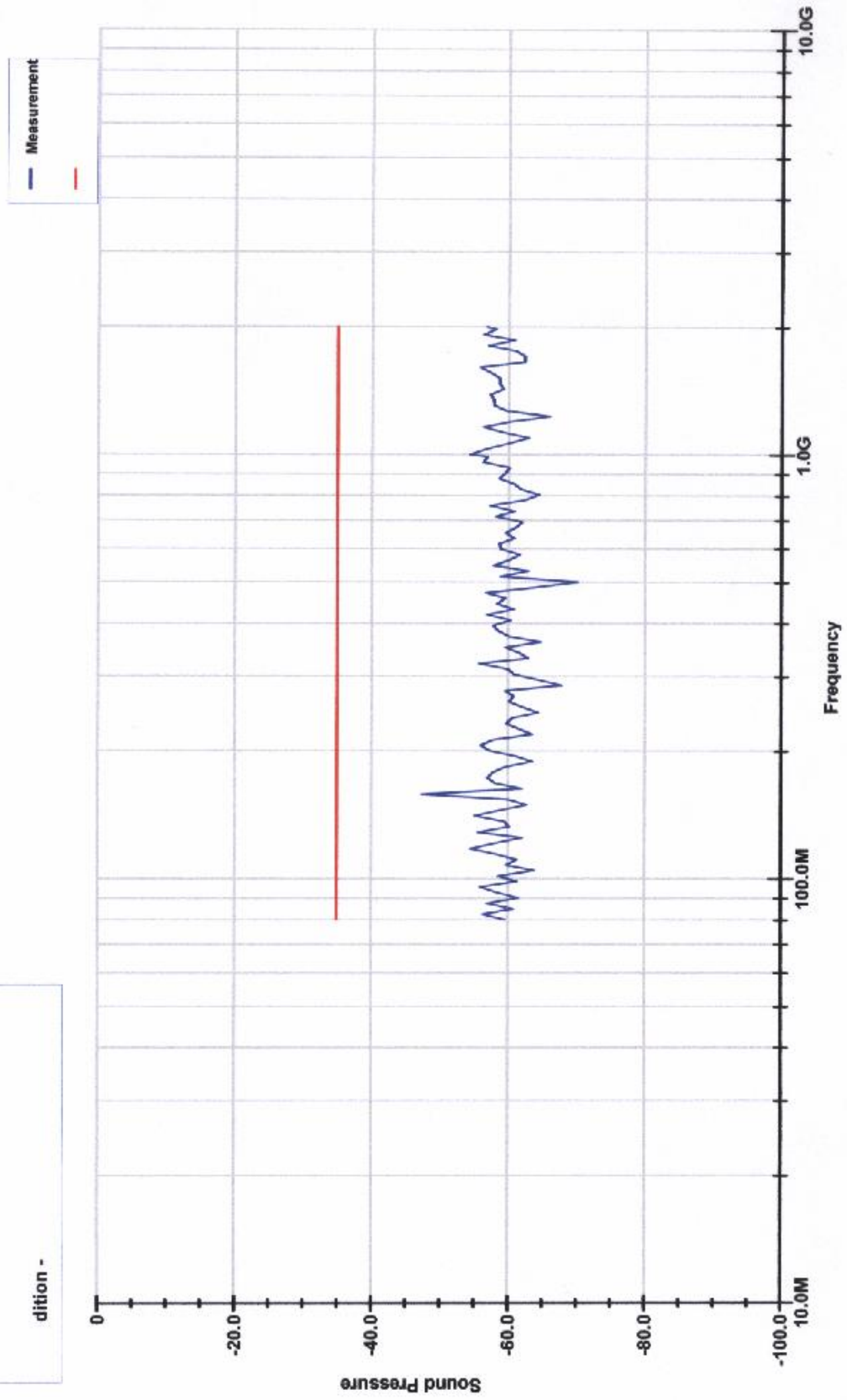
Sound Pressure

DECT MRP Vert

Manufacturer -

- DECT20-B93(FP+PP)

dition -



01:49:34 PM, Saturday, September 29, 2007

4.2.3 Fast Transients Common Mode:**4.2.3.1 Fast Transients Common Mode Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Oct. 01, 2007

Test Specification	EN 61000-4-4:2004		
Test Equipment		Calibration Date	Recommended Recal. Date
EFT Generator/Clamp\Noiseken\FNS-AXII		Sep. 21, 2006	Sep. 20, 2007
Climatic Condition	Ambient Temperature: <u>28°</u> C		

Pulse: 5 /50ns Burst: 15ms /300ms		Repetition Rate: <u>2.5kHz</u> above 2.0kV <u>5kHz</u> below and equal 2.0kV		Test time: <u>1</u> min/each condition	
\Voltage\Polarity\ \Test Point\Mode\Result\		<u>1.0</u> kV		<u>0.5</u> kV	
		+	-	+	-
Power Line	L	A	A	--	--
	N	A	A	--	--
TEL Line		--	--	A	A

Note: “A ” means the EUT operates with ☒ no user noticeable loss of the communication Link.
☒ no loss of user control functions or stored data.
☒ no unintentional transmission.

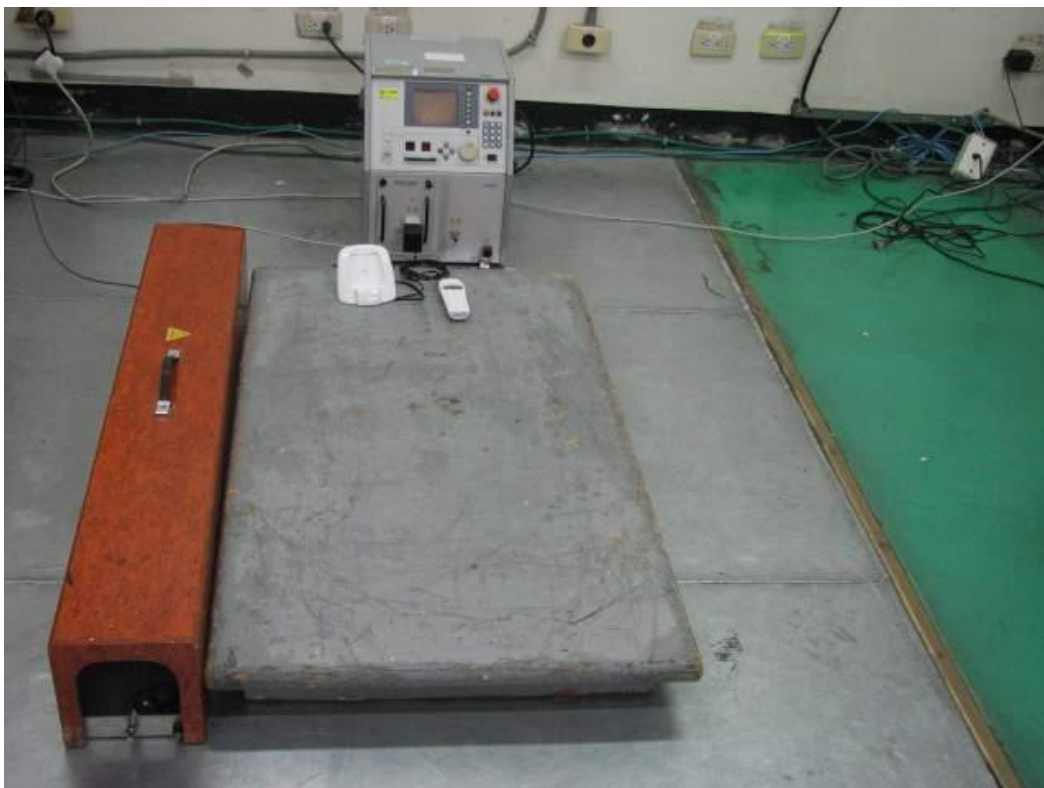
“ -- ” means the test is not applicable.

4.2.3.2 Fast Transients Common Mode Test Setup Photos:

1. Power Line



2. Tel Line



4.2.4 Surge, Common and Differential Mode:**4.2.4.1 Surge, Common and Differential Mode Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Oct. 08, 2007

Test Specification	EN 61000-4-5: 2001		
Test Equipment		Calibration Date	Recommended Recal. Date
Lightning Surge Simulator\Noiseken\LSS-15AX		Nov. 21, 2006	Nov. 20, 2007
Climatic Condition	Ambient Temperature: <u>23°</u> C		

Waveform: 1.2/50µs(8/20µs)			Repetition rate: <u>60</u> sec		Times: <u>5</u> times/each condition	
\Voltage \Mode \Polarity \Phase \Result			0°	90°	180°	270°
1.0 kV	L – N	+	A	A	A	A
		–	A	A	A	A

Waveform: 1.2/50µs(8/20µs)			Repetition rate: <u>60</u> sec		Times: <u>5</u> times/each condition	
\Voltage			<u>0.5</u> kV		<u>0.5</u> kV	
\Turn earth			TIP		RING	
\Testing mode \Result \Polarity			+	–	+	–
TEL Line			A	A	A	A

Note: “A ” means the EUT operates with no user noticeable loss of the communication Link.
 no loss of user control functions or stored data.
 no unintentional transmission.

4.2.4.2 Surge, Common and Differential Mode Test Setup Photos:



4.2.5 RF Common Mode, 0.15MHz~80MHz:**4.2.5.1 RF Common Mode, 0.15MHz~80MHz Test Data:****A. Operating Conditions of the EUT: Talking Mode**

Test Date: Sep. 29, 2007

Test Specification	EN 61000-4-6:2005		
Test Equipment		Calibration Date	Recommended Recal. Date
Signal Generator\R&S\SMY02		Nov. 21, 2006	Nov. 20, 2007
Wideband RF Power Amplifier\IFI\M5540		Nov. 21, 2006	Nov. 20, 2007
RF Voltmeter\Boonton\9200B		Nov. 22, 2006	Nov. 21, 2007
Controller \HP\ Vectra VL24/33		N.C.R.	N.C.R.
RF Switch \COMTEST\RF-6		N.C.R.	N.C.R.
High Power Direction Coupler\WERLATONE\C1795		Nov. 22, 2006	Nov. 21, 2007
Attenuator\RADIALL\R415706		Nov. 07, 2006	Nov. 06, 2007
801-6 Coupling Network-M2\FCC\4412-025		Nov. 06, 2006	Nov. 05, 2007
801-6 Coupling Network-T2\FCC\FCC-801-T2		Nov. 06, 2006	Nov. 05, 2007
Climatic Condition	Ambient Temperature: <u>26°</u> C		

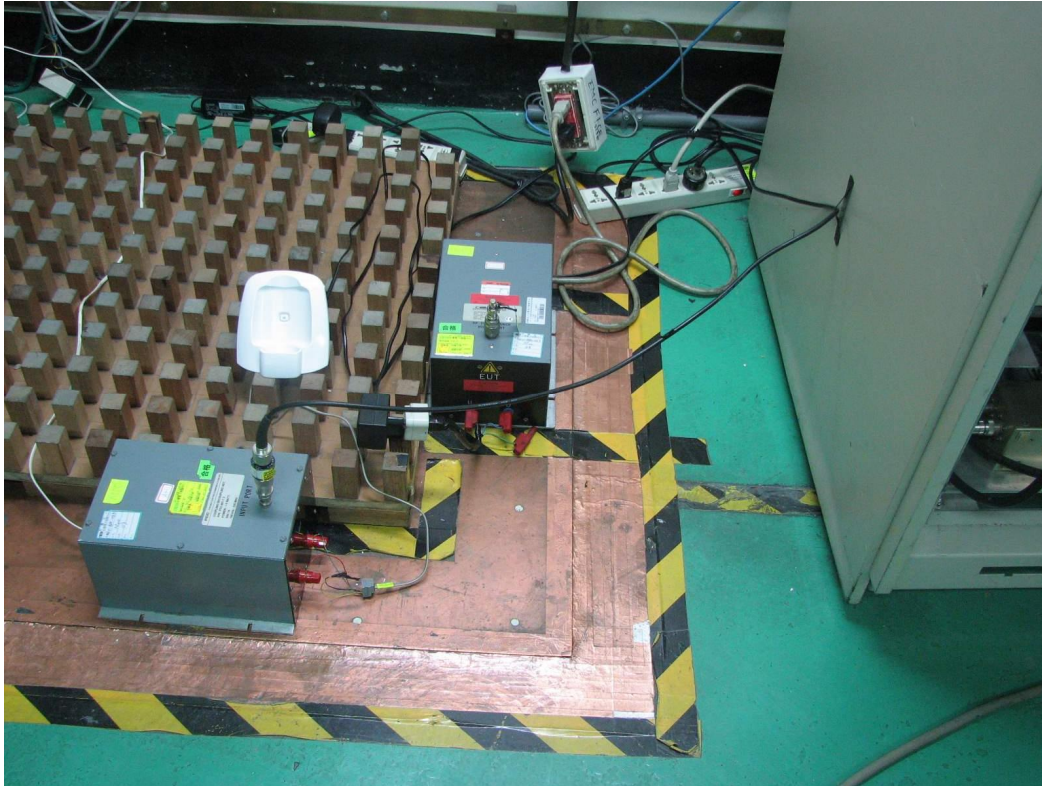
Frequency Range: <u>0.15</u> MHz ~ <u>80</u> MHz	Test Voltage: <u>3</u> V	Modulation (AM 1kHz 80%)
Sweep Rate: $\leq 1.5 \times 10^{-3}$ decades/s	Step Size: $\leq 1\%$ of preceding frequency value	Dwell Time: <u>2.9</u> s
Frequency Range (MHz)	Tested Line	Test Result
0.15~80	Power Line (M2)	A
0.15~80	Tel. Line (T2)	A

Note: “A” means the EUT operates with

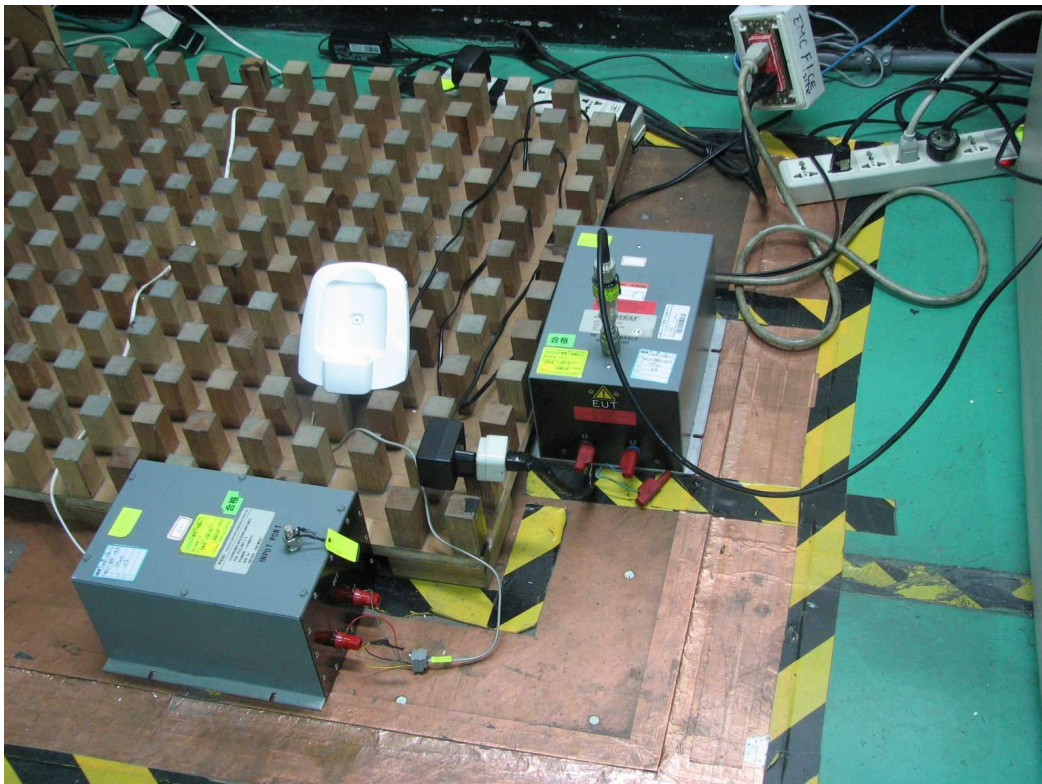
- BER less or equal than 1×10^{-3} during the test sequence.
- the speech output signal level at least 35dB less than the previously recorded reference level.
- no loss of user control functions or stored data and maintained communication link during and after the tests.
- no unintentional transmission.

4.2.5.2 RF Common Mode, 0.15MHz~80MHz Test Setup Photos:

1. Power Line



2. Tel Line



Conducted Immunity Test

Sound Pressure

DECT - ERP (Power Line - 2)

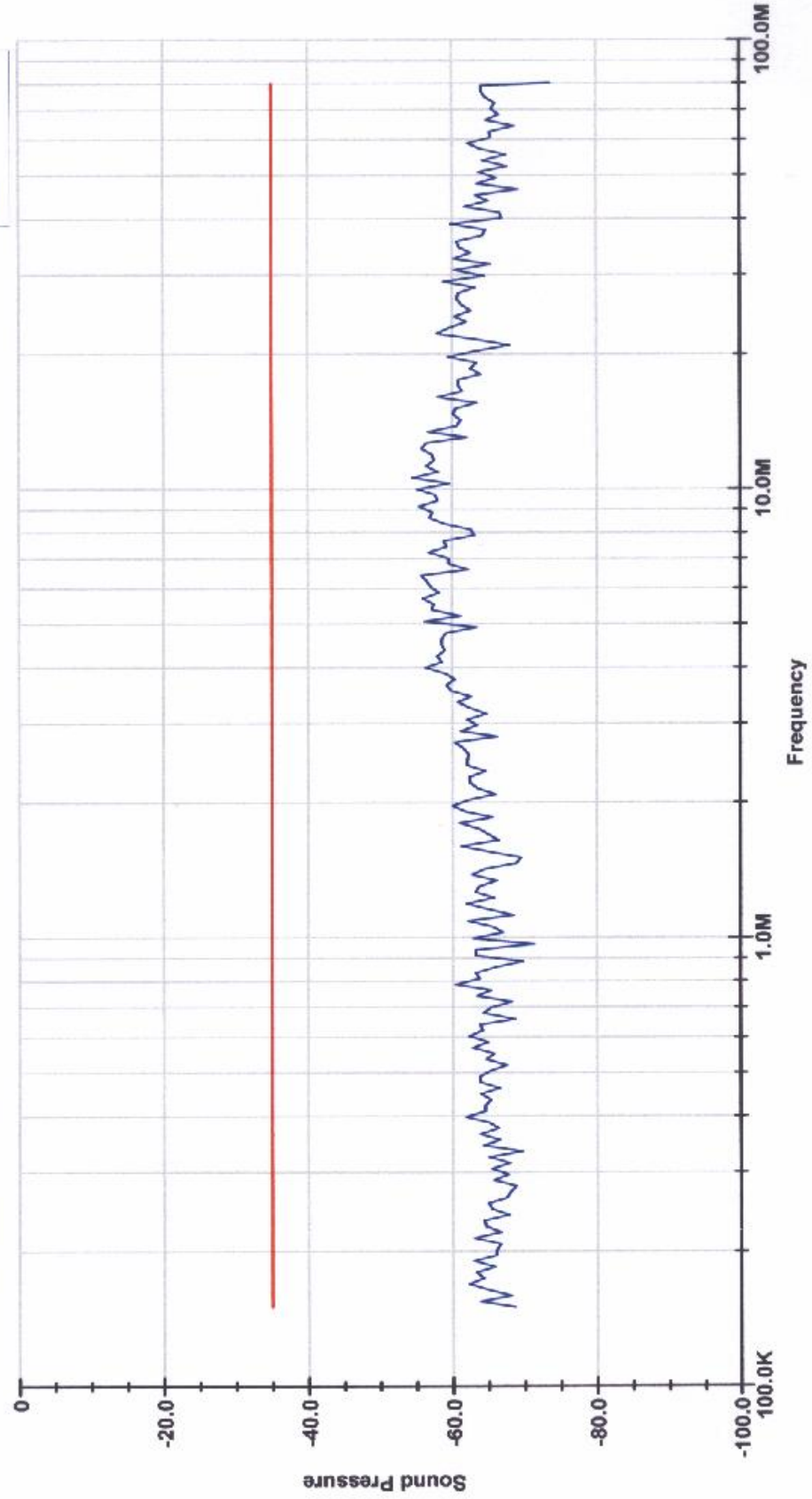
Manufacturer -

- DECT20-B93(FP+PP)

dition -



Measurement



05:44:15 PM, Saturday, September 29, 2007

Conducted Immunity Test

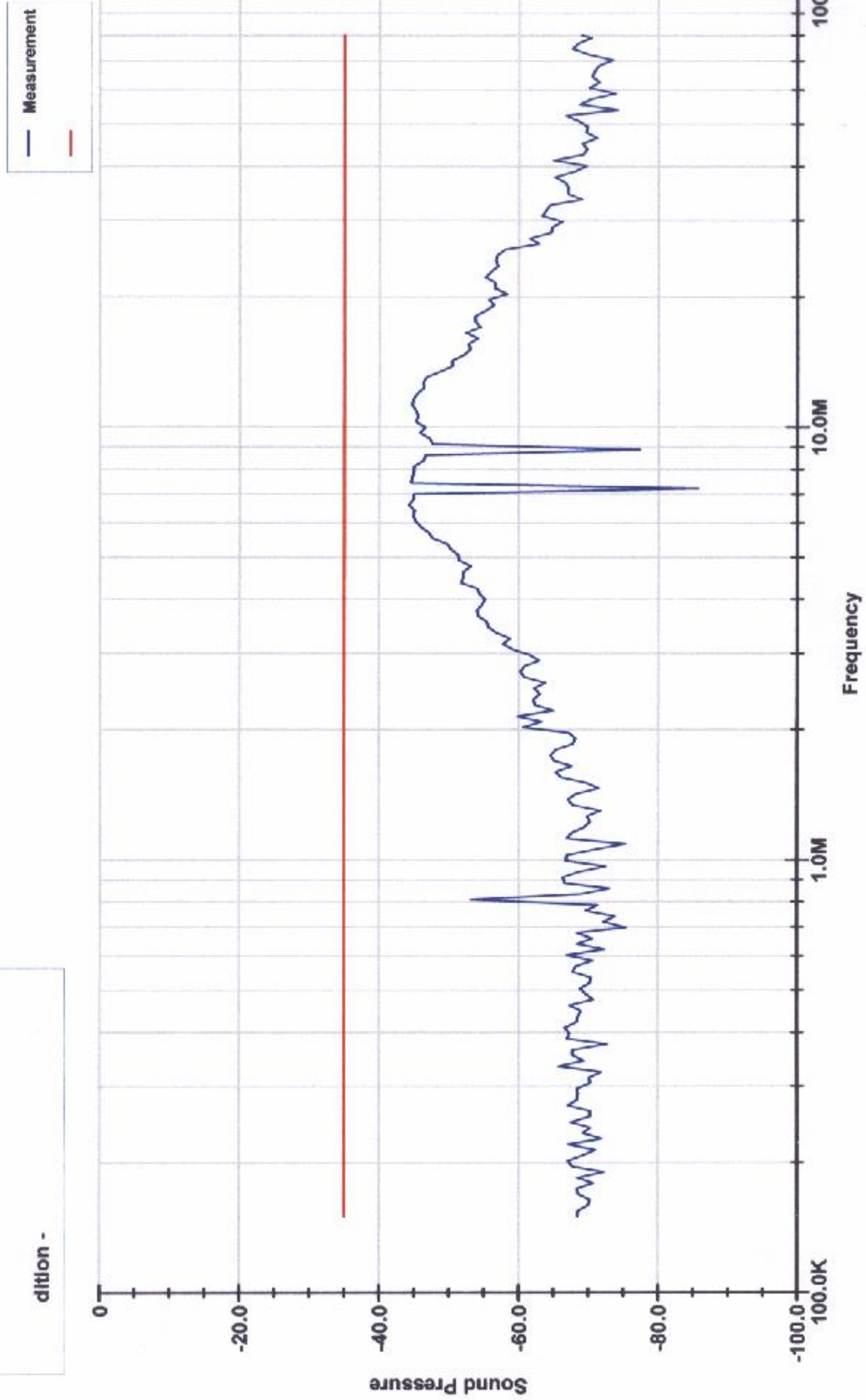
Sound Pressure

DECT - ERP (Tel Line)

Manufacturer -

- DECT20-B93(FP+PP)

dition -



05:15:58 PM, Saturday, September 29, 2007

Conducted Immunity Test

Sound Pressure

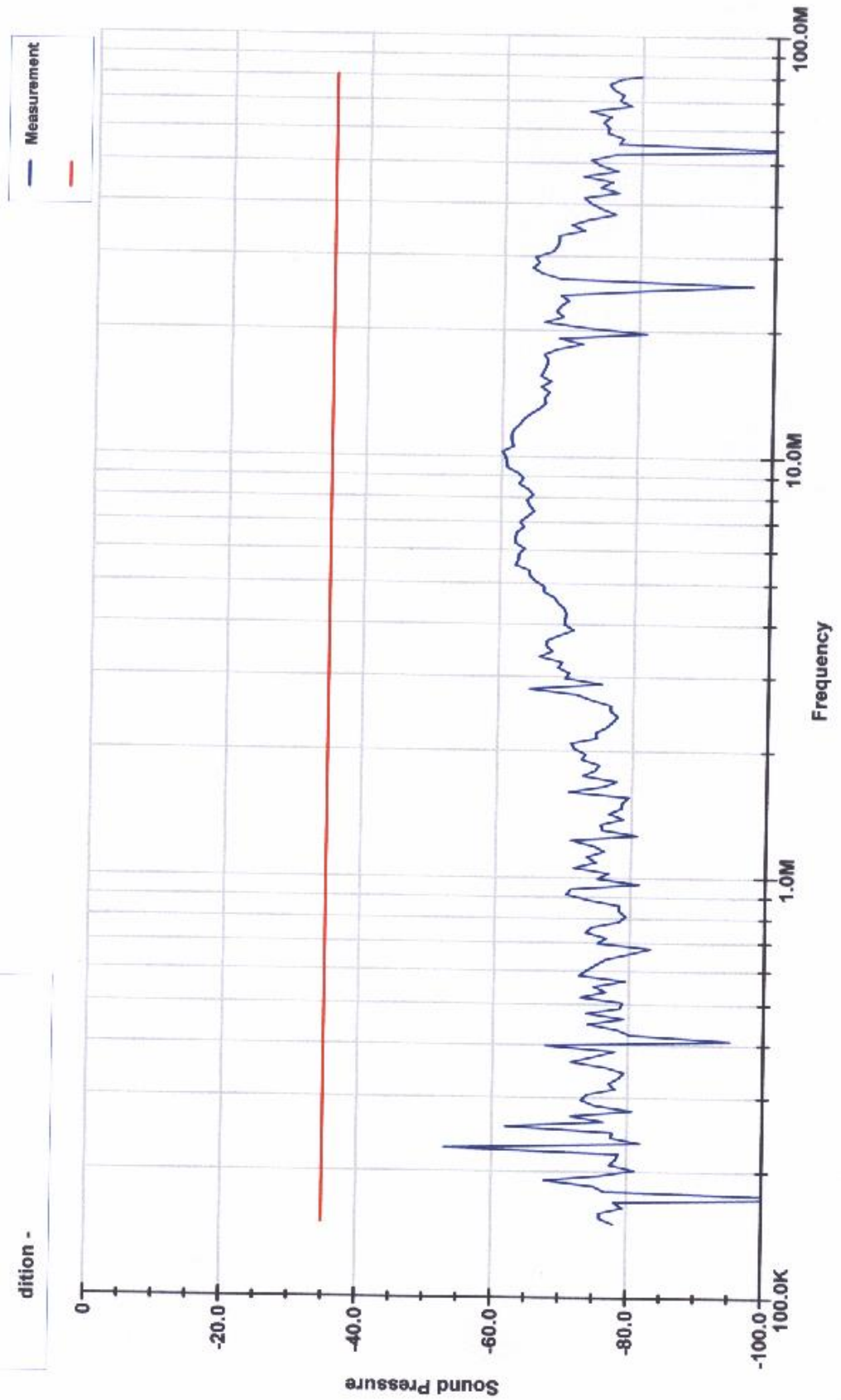
DECT - MRP (Power Line - 2)

Manufacturer -

- DECT20-B93(FP+PP)

dition -

ETC





Conducted Immunity Test

Sound Pressure

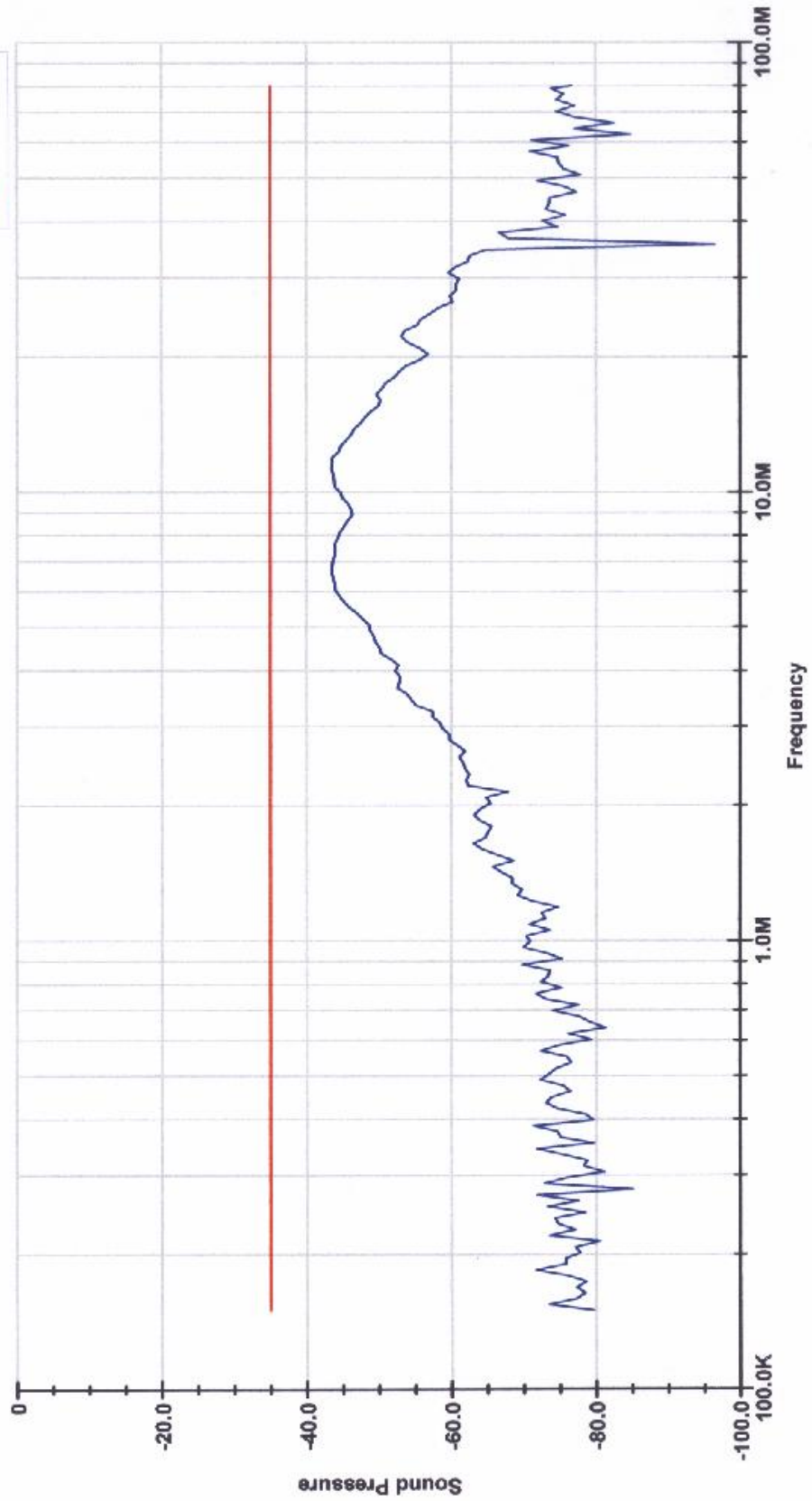
DECT - MRP (Tel Line)

Manufacturer -

- DECT20-B93(FP+PP)

dition -

Measurement



03:57:44 PM, Saturday, September 29, 2007

4.2.6 Voltage Dips and Interruptions:

4.2.6.1 Voltage Dips and Interruptions Test Data:

A. Operating Conditions of the EUT: Talking Mode

Test Date: Oct. 01, 2007

Test Specification	EN 61000-4-11:2004		
Test Equipment		Calibration Date	Recommended Recal. Date
EMC Immunity Test System\THERMO\EMCPRO PLUS		Aug. 25, 2007	Aug. 24, 2008
Climatic Condition	Ambient Temperature: <u>23°</u> C		

Test mode	Voltage dips	Durations (ms)	Interval (s)	Times	Phase	Result
Voltage interruptions	100%	5000	10	12	0° / 180°	C
Voltage dips in %U _T	60%	100	10	12	0° / 180°	A
	30%	10	10	12	0° / 180°	A

Note: “A ” means the EUT operates with ☒ no user noticeable loss of the communication Link.
☒ no loss of user control functions or stored data.
☒ no unintentional transmission.

“C ” means the EUT function was not correct during the test, which was recovered by operator after test.

4.2.6.2 Voltage Dips and Interruptions Test Setup Photos:

